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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,728	11/13/2002	Brock Osborn	040849-0215	6165

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GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER	
FERRIS III, FRED O	

ART UNIT	PAPER NUMBER
2128	

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/065,728	OSBORN ET AL.	
	Examiner	Art Unit	
	Fred Ferris	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 November 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 August 2006 has been entered. Claims 1-21 remain pending in this application and stand rejected by the examiner.

Response to Arguments

2. Applicant's amendment and supporting arguments filed 22 August 2006 have been fully considered but they are not persuasive.

Prior art rejections: Applicants now argue that the prior art does not teach the ability to "discern" a parameter which was previously unknown or unconfirmed from among the monitored operating variables as now required by amended independent claims 1, 9, 13, and 19. The examiner respectfully disagrees. Looking into applicants' specification for guidance on the specific meaning of discerning unknown or unconfirmed parameters revels the following:

"[0018] In step 210, the data processor 130 discerns at least one parameter affecting system performance from the data collected by the sensor 120. In other words, step 210 preferably actively discerns at least one parameter which was previously unknown or unconfirmed. Thus, for example, if the operating temperature of the equipment 110 is being monitored to prevent the operating temperature to rise above a maximum allowed operating temperature, the data processor 130 in step 210 may discern that an operating temperature below the maximum allowed operating temperature can still lead to accelerated equipment

110 failure. In such a situation, the data processor 130 can be said to have discerned a new parameter affecting system performance, even though this parameter was previously being monitored for some other reason. Hence, it should be appreciated that the term "discern" requires more than monitoring of a predetermined operating variable."

While there is no clear definition, it appears from the passages above that "discerning" merely requires monitoring parameters over a given range, and above or below a given threshold. Specifically, in the example recited above relating to temperature sensing, it appears that discerning at least one parameter which was previously unknown or unconfirmed, simply consists of monitoring a system performance parameter within a range of temperature values. (e.g. monitoring an operating temperature below the maximum allowed, as noted above) The examiner submits that any system using Smart transducers, or NCAP modules which incorporates a memory, and a processor, inherently has the ability to determine if a parameter was previously unknown or unconfirmed. Prior art Eryurek, for example, anticipates this feature by disclosing determining both know and unknown (not known) operating conditions (CL9-L17-30) by monitoring sensitivity parameter values and trained parameter values (Figs. 2, 6). This feature is also rendered obvious by the combination of Warrior and Dicenzo as noted below since Dicnenzo teaches determining (discerning) if parameters monitored parameters are within or outside of known operating condition ranges (CL5-L10-29).

The examiner therefor maintains the 102(e) rejection as anticipated by Eryurek, and the 103(a) rejection as obvious over Warrior in view of Dicenzo. However, since IEEE Std 1451.1-1999 and Warrior do not explicitly teach determining (discerning) a

range of parameter values, applicants' arguments are persuasive and the 102(b) rejection in view of theses references is withdrawn.

Preamble of the Claims

3. The preambles of independent claims 1, 9, 13, and 19 as presented for examination, have not been given patentable weight. Appropriate weight is given to limitations recited in the body of the claim that are needed for purpose of antecedence. "A mere statement of purpose or intended use in the preamble of a claim need not be considered in finding anticipation; however, it must be considered if the language of a preamble is necessary to give meaning to the claim" Diversitech Corp. v. Century Steps, Inc., 7 USPQ2d 1315 (Fed. Cir. 1988); In re Stencel, 4 USPQ2d 1071 (Fed. Cir. 1987)

Claims Interpretation

4. Applicants are disclosing a method and system for analyzing the performance of a system inclusive of a system statistical associate (SSA) for collecting data relating to operating system variables affecting the performance of the system and generating a report. Based on applicants disclosure, the examiner has interpreted the term "system statistical associate (SSA)" to simply be a sensor module with a data processor and communications channel used for monitoring equipment performance parameters (such as temperature) and generating a data report. The examiner notes that these broadly claimed SSA elements included in independent claims 1, 9, 13, and 19 are generally standard features available in commercially available control monitoring equipment from

vendors such as Esensor, TeleMonitor, or National Instruments. These modules are known in the industry as "smart transducers" or "NCAP modules" and defined as standard networked sensor modules in IEEE Standard 1451.

5. Claims 1, 9, 13, 19, and 21 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US Patent 6,539,267 issued to Eryurek et al.

Regarding claims 1, 9, 13, 19, and 21: Eryurek teaches a method and system for analyzing system performance via a smart module (SSA equivalent) inclusive of capabilities for collecting data on system operating variables (Abstract, Figs. 1, 2), discerning data parameters affecting system performance (CL1_L50-CL2_L9) from the data, and generating a report (data log) on the parameters via embedded sensors (Figs. 1, 2, Abstract, CL2_L30-, CL3_35) monitoring device parameters, a data processor (Figs. 1, 2, Abstract) capable of affecting monitored device performance, and a data parameter transmitter (Figs. 1, 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 2-8, 10-12, 14-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over "IEEE-P1451 Network Capable Application Processor Information Model", J. Warrior, IEEE-P1451.1 Working Group, IEEE 1996 in view of US Patent 6,847,854 issued to Dicenzo.

Warrior renders obvious method and system elements of claims 1, 9, 13, 19, and 21 relating to analyzing system performance via a smart module (NCAP: SSA equivalent) inclusive of capabilities for collecting data on system operating variables (Figs. 1, 2, Sec. 5.0-7.3), discerning data parameters affecting system performance (Figs. 2, 3, Sec. 4.0-8.4.2.2) from the data, and generating a report (data log) on the parameters via embedded sensors (Sec. Fig. 3, 7.4-8.1) monitoring device parameters, a data processor (Fig. 1, Sec. 2.0) capable of affecting monitored device performance, and a data parameter transmitter (Sec. 7.4-8.1).

Warrior does not explicitly disclose the elements relating to generating, communicating, and correlating a data profile of parameters, a lifetime model, or that operating variables include parameters such as temperature, load, humidity, and vibration.

Per claims 2-6, 8, 10, 11, 14-16, and 20: Discenzo teaches collecting data on system operating variables (CL9_L39-46) which affect system performance and reliability by discerning data parameters affecting system performance (CL10_L26-53) data, generating a report (CL31_L18-19, i.e. status) on the parameters via embedded sensors (Figs. 9-11, 18, CL5_L60-67) monitoring device parameters, a data processor (Figs. 6, 7, CL24_L21-45) capable of affecting monitored device performance, and a data parameter transmitter (CL30_L3-19, CL31_L63-CL32_L39, CL34_L41-CL6_65, Figs. 15-19). More importantly Discenzo further teaches the use of a life expectancy models (CL15_L60, i.e. a lifetime model), generating and communicating a resulting data profile (CL16_16, Figs. 2, 12-15) and correlating the representative profiles and parameter (CL26_L52-55, CL29_54-57, CL30_L3-19)) Dicnenzo further teaches determining (discerning) if parameters monitored parameters are within or outside of known operating condition ranges (CL5-L10-29).

Per claims 7, 12, 17, and 18: Discenzo further discloses that the sensors detect operating variables including parameters such as temperature, load, humidity, and vibration (CL38_L59-63, CL39_53-61) and optimizing (automatically changing) parameters to improve performance (CL5_L25-29, CL9_L17-45, CL39_53-CL40_18, especially CL40_L11-13).

It would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the teachings of Warrior relating to analyzing system performance via a smart module (SSA equivalent), with the teachings of Discenzo relating to life expectancy models, and generating, communicating, and

correlating representative data profiles, to realize the elements of the claimed invention. An obvious motivation exists since, as referenced in the prior art, the use of intelligent (smart) sensor technology improves the diagnostic and optimization process associated with enhanced system reliability. (See: Discenzo, CL9_L39-45, CL12_L11). Accordingly, a skilled artisan tasked with realizing a system and method for analyzing and optimizing the performance of a monitored system, and having access to the teachings of Warrior and Discenzo, would have knowingly modified the teachings of Warrior with the teachings of Discenzo (or visa versa) to realize the claimed elements of the present invention.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent Application Publication issued to Schleiss et al teaches monitoring and optimizing system performance using smart sensors.

US Patent 6,032,109 issued to Ritmiller teaches monitoring and optimizing system performance using smart sensors.

US Patent 6,219,597 issued to Longere teaches monitoring and optimizing system performance using smart sensors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 571-272-3778 and whose normal working hours are 8:30am to 5:00pm Monday to Friday. Any inquiry

of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 571-272-3700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached at 571-272-2279. The Official Fax Number is: (703) 872-9306

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